Mott Journal #1 [PN-80-04-09]

This is the first of six pocket notebooks used by Charles P. Mott, a member of the office staff at Menlo Park, to record daily activities at the laboratory. The entries from these notebooks were used as the basis for more extensive entries recorded by Mott in Menlo Park Notebooks #53 and #117. This pocket notebook, which covers the period April-May 1880, begins about one month after Mott's first Menlo Park notebook. The front cover is labeled "150" and is inscribed "Notes taken by the way" and "1st." The back cover is inscribed "1880." The book contains approximately 40 unnumbered pages.

April 9.

All energy lost upon roads and wood apparatus for reducing it to paper dimensions.

Mr. Kenig finished diagram of Incan and Hauler for Electric Transmission.

Started calculating size of iron necessary for running about 70 Bard to the Lumpie, See Note Book No. 66. 64.65.470

Series Inc. collecting evidence on interference case

Bard experimenting on collecting point and learning from office in Aachen at 2 o'clock P.M. Book No. 8 pg. 109

Hammer & Garson experimenting in cleaning Mercury, got high vacuum with Sulphuric Acid & Fume chamber of D.S.M.

Blue gravel Dry Creek Tunnel, Blue gravel Dry Creek Tunnel, Davis Gravel Thompson Flats, Chamberlain Gravel " " Dry Creek Tailings Bottom dry creek terrace, Bottom

Boiling apparatus W-H&R No 68 page 7.
x Carbonizing in vacuum Book No. 57 page 1 etc.
Models for determining forms of Carbons Book 57 pages 19 etc
x Microscopes for carbonizing under pressure Book 57 pages 23 etc
x Wood Loops Book 57 pages 27 etc
x Samples for showing loops from wood Book 51 pages 31 etc
x Wooden experimental for loops Book 57 pages 35 etc
x Styles of loops Book 57 pages 41 etc
x Fine grain annuals from No 36 pg 2 (from No 34 pg 177)
x Carbonization Books No. 57 pg 70
x Gamp screw " " 73, 67, 74, 78, 84
x " Bump " " " 79
x Photometric tests, apparatus & Resistance
x Book No. 63 Solutions No.
x Dynamo Indic. No. 63. 8. 77, 82 (pg 5)
x Glass Hours No. 68 (Carbon inter 52)
x For test on Manganese in B.32 pg 103 etc
x Conductors for Tech " " " 103 etc
x Data & Estimates on Exp & Incr
x Power, conductors etc, Book 59
x Metals Exp Gauges Book No 25
x Tables & Corp dimensions 66
x Carbonizing Models & durations 67
x Chemical Lectures No. 80. 86. 64
x Commutators " 80. Feb 5, 80
x Lamps 70
x Arc & Alloys 40
x Thermo - 21
x Carbonization by Lowrie 82
x Buttons 32
x Chemical Exp. 32
x Insulation 27
x Spirals & Pumps 85
Regulators & Dynamos 79

April 10-

Mr. Hogan

Setting the heating furnace of Soap Palace around by Hogan & Moses.

Blacksmiths preparing copper sandwiches stripes for joints of rails of the Tramway

Working on being finished by Andrews.

Dean making lids for stripping 100 sd. and applying proper drawn to machine for that purpose

Brother Monday of Wood Corps Carpenters for A.M. Gunn & Holly coming on work perfectly. ~~Bent Mat~~ Bean 57 pgs 103

Dr. Moses trying the new pump sponge drop but does not force it give as good results as desired

Pushing tramway work along as fast as possible

Mr. Patterson making needles to bend and shape wood corps

April 11

Under tramway pushing work on road to day the taking gang of R.R. on to rails

Laying the rails on all the work on the road today.

Wood Corps Holly ——— pain-pots in lamps about 5 hours P.M. Clean up

Cut the door one to be in glass before being taken from frame

April 12

Dr. Moore had frangible glass
tube made for making the fog
of fire Monday when putting it on
the decorator and is testing the
lamps.

Began getting up from travels etc.

Received Corpse in frozen state
we are to chisel bending them.

The first automatic route now travels
Holden finished and put on the
A. M. T. & S. F. x

Mon. — Force of Hammer moving
levers for shaping and bending
both same time.

Young Jones takes Hat in morning
Sid drive
Mabry in afternoon

Closing Mr. Upton today Monday

Received total of gyroscope $2.137

Gaston and Stotler operation on 15
lamps with their pieces for giving
them a ground glass appearance
and brought them in beautifully

Holy lamp on pump yet to night

Giving off lamechodle and stay

Stone it is heated up

True and Kenny using New York and
Alaska acres to night and gets

The pack place with name Burns Bros.
Light Tea New York Hot air hygrometer
at just 12 o'clock last night

Wheeler finished and delivered ends
Glass Room

April 13

Bunsen glass Union marking burning gas for an article by Mr Upton Boston No. 63. page 98

Gilles. Cameron experimenting on Bessemer castings

Dean finished and is working the Dynamometer to take for cutting wood. Cooper Boston 51 pg 55

Calorimeter test double carefully made Note Boston - 52 pg 161

Long dynamometer test made on generator for Motor in Laboratory gets 1.6 horse power Boston 59 6100 ft-lbs

Clarke makes and 6.3 Ohm copper conductors necessary to supply the lamps proposed to be put out on Davis - Boston 56 pg 50 & 6100 ft-lbs.

Hedger trying dissolving rare earths

Good dense sediment with its radium.

Commutator. Spoke to day in Boston No 50. the notes of Mr Eisenhart on changing angle of commutator surface date Feby 3. 1880 page 98 Book 80

Crosby and Hipple to day used for separating sand, one magnet clean the other and get metal with results

April 14

Lost lamp bulb glass broken 8.16 this a.m.

Taking testimony in interference case Shook v. Edison

Finishing material tests made by Mr. Wright, machine fitted to the electric time 700 revolutions

Picking seeds in preparation to supply the electric shop of E. & Mfg. Co.

295. 268. 277 Receivin with the new manufacture. New machine as with 845 476. 465. Divides 7 magnet 759 84. 179

New Machine 148 Revolutions after [illegible] operation. 243 lb. filed off armature, + 161 filed on brushes off. Machine 327 plate 336 Rev. filed off, brushes and armature on, 295 filed + brushes on. 277 + 269 filed & brushes on.

New Machine their cause

Filed armature from receiving Rev. 845 = after bringing up field on 476 + 465 = Field + armature off 759

Pump R. Mason turns down asphalt pump and drawing to 11-50 regular speed up, adjusting air flow trap and [illegible] tube

April 15

+Lily Acadia pump delivered Serial No. 1210

+ Mr. Lessing with Miller and Electric Improvements the current of the main lines in Laboratory No. 1206 by

+Mr. Edison generator on Miller with Edison Pony Improvements Book 37 pg 85 pg 135

+Bothin making pump structure Book 68 page 25.

+Mr. Kenny in Street & Edison Subway continued to day

+Mr. Kipple experimenting on sand separation by use of magnets as many as four placed one on the other having been tried first Mr. Kipple to give as good results as have been obtained. Also through the hopper there are 100 lbs in it Minutes and separate the sand Molly

Mr. Sand brass from finished and in use by Van Cleve Made under at Fleming serial

+Mr. Bottino selected and directed Dean to mass new Motor for testing Case Book 37 pg 70

+Mr. Edison requests Clark to figure the resistance decline of Edison bulbs taking the case of Ignacewicz as ~~[illegible]~~ formulation Book 10. Also making correction in book of Sofe Brasher Morning

+A Hopshade large globe for Electric Candles received to day

+ Monitor of Natural Gas Carburetor

+Edison generator for Columbia Park together and running

April 16

A drawing of Marvin (Saint Louis) of water cooler & stalls cut of Mouldes this M. M. Book No. 57 pg. 115. Principally joining also so open carline pan and frame cast in new forms

Also drawing of Roper drawing from Schoch Flying Kites for Kinetograph and work at work on Kinetograph building

Also sketches made on account of Carl Greenberg life in state prisons

Mr. Edison sketches and models of pipes and tubing to make three Kloops to be used in connection with magnetic separation of sand ores

Also sketch Upton & Wise in putting up circulation desk and condensers in Kloops room to be used in connection with pump experiments Carl Greenberg by them

Revise been Stirer Off at work on Kloop apparatus to receive the magnets and brushes to section the mine Mgt. of car of the tramway. Book Book 50 page 156 &c

Armature of 254 dive wire and fine in size per same time in charge Stamping mica or less wire bottom not by Cunningham and formed and ready out of balance and in pieces in quite wires by the extra section pressure by Wist upon

Learn to work in wire and how about attachment for cover to guide in putting Kloops to be used in sample and other apparatus of Mr. Edison Book 57 pg 71 &c

Unclear Dynamo motor tested and shipped to Mr. Bergmann

(Quality Tailings Spring valley) invoiced to Oct 4 25

April 17

Martin Foss planing belt, dam. X 15 02 in. to be on in shop in said board former.

Having tested the electric governor at 260 revolutions the force was 4 pounds to five pounds one pound through 3/16 of an inch and at 260 revolutions in every revolution

Jump experiments with belt, belt and all dry weighing 2 oz. and a pulley one inch in the experiment

Columbia Elec. Faradic Machine X Nos. 11 & 12 Shipped for sale Magnetic Iron wire pots of 9th St. N.Y.

Pulleys between old office and Schoolhouse taken out this morning.

Upton letter Attorney General Albany, asking 2 pulley belts for other charge Pulley and belt Book 82 page 201 Pulley Book 82 page 201 and a shaft with 2 wooden belts Lamb No. 1029 Bk 32 page 204 &c

Made forgiveness the theoretical frictional resistance of belts & pulleys and is driving means to close the accuracy of his calculation Book No. 72 page 68 &c Total frictional resistance 20.559 for the

Two gents said to be reporters from the here and in charge of Mr Upton

Review sheet for tramway and

April 18

Land which Given to Otis from which to construct the saws, pulleys & castings

Van Silver seconded an adding from Fox wood worked up from a regular license according to new pattern

Otis from County for Mark Newport building the number of Elizabeth glass

Francis Silver he has accounts for his vacuum pump

Otis tramway, three men grading and straightening track, three laying track & stringing and three at building and other work connected.

Simpson Bennett & James Stewart to be on Mill to assuming two of the pumps with same board leaf Compass

Mercy of Tailings hereby assuming same and separating the pro-rata Edward for Slyde

Pump after Francis design made that broken by men before black frock and in having the two bars taken out way in shape in about 4 hours. The pump Mr Andrews making new Style pump after which by Francis Brown 50 page 176 to account for Columbia

Clark concerning the repair of the Annual Mechanic.

April 19

Used Corp. Van Olive cutting horseshoe Corp. Penn. 12 week. Milled Lumber by steam, putting three in frame together, got one line of them in good shape

See Diary Olive 13.

Cost of parts Remove transmitter B Corp. 1186
" Garner Meter 56 page 205

Finished pin on wood pipe lamps on line & wires in dark room. Lamp burns as in the nearer time.

Preparing resistance and getting ready for shipping the lamps for Columbia. Arrived 12 x 16 x 70

Afternoon preparing for practical Houston Meter.

J. Moore got good vacuum 27 hrs. Springs in the lamps in 5 hours

Finished Porter making mar-stamps for Wires. Check on Book No. 13 page 39.

Over & Lathing. Mr. C. & J. Hyde assisted by Gordon, experimenting and testing our & Lathing at large lot of which have recently been received.

Generator No. 13 finished and dated & numbered.

Wood milling. Mr. Batchelor making a complete sketch of machine for milling wood Corps.

Photo Meters. Mr. Young during the afternoon for Mr. Hodges & myself in order to show the entire lot of photos

Photo test to Lamps Mr. 32 209 opaque 7½ Corp 12 Lab 7 another 1 day opaque 2 8 opaque.

Machine No. 14 Sabin Lathing.

Got gave me complete & complete taken one of Cunningham and found to have had a cross.

Meter on Hydraulic Press.

April 20

Sample Columbia Mr. Wilson sent to Mr. Cole Mrs A. Mr. Keeping with him some Cologne for Columbia

Stating the tramway Mr. Fairman commences work in Station No 18 for the Rome Copper Mining Mfg Co.

Stay pins in magnets arms of generators stay pin on all arms by Bailey

Mine found 250 lbs of mercury pumps to increase pump vacuum.

Plate glass lids for inner tubes by Edgar

Gas Coupling. Mr. Manning patterns for castings for gas couplings

Automatic cams for Machine for cutting wood bodies made

Card sketch made by Mr. Edison date today sketch copied herein

Weight of Armature & body 212 lbs

Air Blast. At request of Mr. E. Hopkins and Crosby experimenting with air blast with Armature air blast.

Faradic Machines 13 & 14 shipped on Steamer Columbia

Fine sketch by Mr. E. of separating Blast for experiment of sand separator Separator for cutting air out of Carbon, piece of wood shaped for cutting the tube holes, and Separator which I judge to be an arc lamp with electric engine attachment for revolving the carbon. Which I state of today and explained minutes all on one sheet

Mder mner cus poms bro Danielsons in Balance room to Glass Room Thence to Engine room Thence back to Engineers room thence to balance room, thence four Calamutes one at each place by Dawson & S. D. Mott

April 21

Sketch for annulator case for Mohne 15.6. 21. indicate differing semicircular shape from those previously made Book no 79 page 233

Test of Sprague lamp gave Face 9½c Edge 9½c – 5.17c & 9½c Edge 56.7c of Face Book 57 page 2/5

Related charges and claiming for connection to Paris Street lamps.

Meter on Sawmill room disconnected pipe by cause cutting off in Sawmill Sawmill from plate in the at surface of engine

Bomb with single tube answering for Hydraulic and gauge marking by Brown Book 58 page 115

Various leaks cut by Van Ness Street from gave 124.125 & 165 three residence

April 22. Mr Allen expressing for has one for supply carter to be used on Columbia

Compressor room Rattler and Steam ab work on

Following the day the Hose in Varnish polishing down on Steam & engines and examining into records of prime motor engines

Nov 8 state as a pack that Wilkinson will note burn back on the contrary will extinguish fire

Having made test of water use motive

April 22

Small Dynamo. Mr Mathing patterns for castings of small dynamo drawn 3 x 18. Hammer to be 5½ South made by Mr Brown. order 21 April.

Electric locomotive Bennett making patterns drawing

Motor. Bennett on Saturday running as under to test the journal bearing. found to heat. to give an estimate on the journals.

Gem glass and platinum wedges since 10 tubes made in or 20th by Mr Hodgson from experience to day by Hammond and found to be entirely free of cracks

Condenser tower, receiving a bath in Gas tarry

Pump. Dr Muir experimenting on weight of pump made by Brown yesterday.

Safety catch [illegible] by Mr Hodgson

Lamp of Platina wire made for experiment by Mr Hopson. Wire vacuum on 5 days. Bauulb gave about 1½ candles after vacuum gave failed by Mr B.

Stopped. several trees of the phenomena

Sand vacuum mixture by Mr B and Brown drawn to have apparatus made

High speed. Mr Fuller, Manufacturer of high speed engines from Newark. Mr Dees Mr Wenning

Blast. Pipe run by Crosby from the recorded for length of furnace up stairs in Laboratory and some experiments made with them. results not satisfactory from smoke

Dynamometer reducing pressure of steam on engine to 10 lbs and gave the same. Full length of stroke to see if the dynamo would be any steadier. But had no effect

April 23

Helm & Cunningham gave to N. B.
the pencils & drawing.

Short & Clarke letter up superintendent
Clarke for saved operations.

X Condensator tubes showing scale loss.

Condensator with tubes & shells arranged
X for electric heater & shell & tubes
made for showing the condensation.

Telephone receiver Ancheson at work on
X receiver to make it air tight to resist
atmospheric influence.

Dynamo new form by Mr. Mercier Book
56 page 67. Magnets on above the rotor.

Pump double tube on rotation the other
arranged for lamps ~~tube~~ bottom
X sketch Book 63. page 54. also single
tube pump sketch page 53.

Tramway station being designed and
made sketch of dynamo station & speedy
X adapted to control movement of trains
X of electric tramway also sketch of
tunneling machine for glass house

April 24

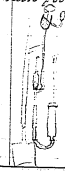
Upton & Cunningham again in New York.

Pump by Frances again up and at work. North Lamps on, vacuum in.

Journal. Large book in which to record where vessels received to day.

Columbia, leaves from the mew at 7 o'clock on Columbia. that two of the generators now are running to night.

Pulls put on pumps of Hydraulic press. Ready run for article



April 26

Lothumbia. Bruce Upton Force and Cunningham in New York 15 day testing lamps &c. by the Light speed at which the observation was taken, also proceeded not the insulation of one of items was injured and in brought back for overhauling. also sent a number of lamps of both extreme high & low resistance dressed back.

Mr Edison & Mr Marks specially in fulfillment of appointment made with Mr Porter on 22nd

Jumbo Bottom started pumps in glass room get pump vacuum in my that line,

Parading dance by young morning by Crane

April 27

Ore from High Mountain Lode assay by A. Bastow being worked to better

Mining Locomotive magnets with low voltage of 110 volts.

Water pipe leading from Pond reservoir and the 3rd and main road supplying Hand in pressing water back through Mine carrying with it quantities of dirt and mud.

Pb. grade assay the best expect to work

Cleaning Mercury for mines and made power for washing mercury from by by water air pump air through the mercury which is under water.

Pump of Hydraulic force working by power of electric motor and pressure Hydraulic Gage 115 to 1000 as high as desired and necessary.

Reception on board Columbia Mon. Pl. Pond evening and those who were given tickets have gone home pleased.

Visitors Mr. William Ivanhoe Brown Helizer Brown Carman Wilson Jones Wagner Mr. Edwin Doe

Pump Frances claims good pump 2 accounts in six minutes

Amalgam first by Lewis Tweed formed today. One which had lain some time had to have a little compacting in consequence of separating of quicksilver.

April 28. 80

Gave for consideration to Steele Lamp
Commenced Paving down

Locomotive magnet wound with .049
wire charged and by showing the
X stream of iron such as would be by
the generator to come in contact with
the poles. Having calculated the power
required to force by pump one inch from
magnet to be 6400 pounds

Hydraulic Motor worked pump against
15 lbs by hydraulic pressure gauge and
X water pressure varied 60 to 65 lbs. when it took
to again 1 x 3 in cy pressure to
8 lbs by 2½ lbs pressure

Galvanometer Mr Blake having made a
X galvanometer to measuring the energy
lost in armature journals

Lamp hanging drive of three spirals
X springs divided to right and made
by Alt

Pump Franklin claimed to have road
lamp ready, ready in about an hour
to seal off

Autographic. Late Coil magnet Mr.
Wilmer gave N.Y. Tel. wire
X connection and how work of about
175 miles through which it is quite
good. would be autographic.

April 29

Gauge Trouble. Gauge reading 12 to 13 Niles of Mercury per Minute. Cause unknown.

Good broke out and carriages by Van F. Keene put in lamps & compound lighting 1 day 12

Condenser bores. Ayres bore all day drawing condenser bores from Detroit.

Pump double Strainer set up By Moses, Hammer Motors run on the Lamps on Keene Lamps in 5 hrs. showing marked better perforation than in the last.

Cleaning Mercury. Mr. Moses and Crew pipe coming to large bottle & mercury Condenser for cleaning mercury.

Wood Milling. Bassler and Dean made new dams for wood mills and tried them good results

Intermediate vacuum. Hammer has been several days showing a lack of much lower vacuum than usually obtained, to test the relative value of very high vacuums

April 30.

White City lamp wheeler for sand-
X ing dark room

New Dynamo Room Co. making bottom
X for pulleys to new dynamos, small
for fuses where for machines are used

Repairs to Colonial Theatre making
X bottom for night & left hand balcony

Downspouts being sent down X

Tramway rails skived as far as the
X street cross permits

Wood for lamp bulb jinrikisha and in
X house, works well

Switch board for Columbia building
X by Anderson

Sound styles of dancer for delivering
X flames of sudden fire being tested

X Independent Mark Broadcasting Co. piers

May 1.

Armature repaired shipped to the
X Columbia

New lamps Mr. Bachter domic &
X Satchel New form of lamp and other
for rolling wires for lamps B. 57 Leg 118 Ba

Condenser to lamps w.s. R.R. Colonial
X each of No 10 wire being done

Miller, Garner commence line of experiments
X to ascertain whether or not the rolling of
Copper plate does not impair the surface
of copper causing unequal absorption of current

Calorimeter to test energy in power of
X Boots. 72 Leg - 145 °/°

Mug board & wheel for making and
X measuring connections to accelerating Mag.
or magnets giving reading of latter being certain motion to generator

X Cleaning boiler Hood Cleaning out boiler
and cleaning same

Experiments Notes of calibration of Thread. page 102 of Note book No 5-2. dated October 22. 1879. 9 a.m.

Exp. Notes on changing angle of circumferential lenses. Feby 5. 80 Book 80 pg 99.

Costs of Reading & transmitting Book 56 p. 111
" " Faradic Machine " 56 p. 200